(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



. | 1841 | 1845 | 1846 | 1846 | 1846 | 1846 | 1846 | 1846 | 1846 | 1846 | 1846 | 1846 | 1846 | 1846 | 1846 | 1

(43) International Publication Date 31 May 2001 (31.05.2001)

PCT

(10) International Publication Number WO 01/39423 A2

(51) International Patent Classification?:

(21) International Application Number: PCT/US00/42201

(22) International Filing Date:

16 November 2000 (16.11.2000)

(25) Filing Language:

English

H04L 1/00

(26) Publication Language:

English

(30) Priority Data: 09/447,022

22 November 1999 (22.11.1999) U

(71) Applicant: TANTIVY COMMUNICATIONS, INC. [US/US]: 2200 Front Street, Suite 300, Melbourne, FL 32901 (US).

(72) Inventor: PROCTOR, James, A., Jr.; 440 Mosswood Boulevard, Indialantic, FL 32903-4007 (US).

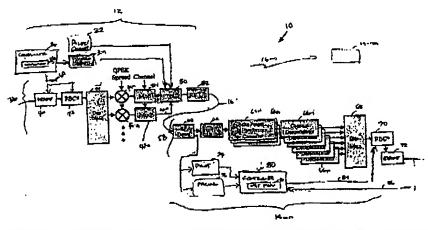
- (74) Agents: THIBODEAU, David, J., Jr. et al.: Hamilton, Brook, Smith & Reynolds, P.C., Two Militin Drive, Lexington, MA 02421 (US).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LI, LU, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TI, TZ, UA, UG, UZ, VN, YU, ZA, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

 Without international search report and to be republished upon receip: of that report.

[Continued on next page]

(54) Title: VARIABLE RATE CODING FOR FORWARD LINK



(57) Abstract: A technique for encoding a signal used in a digital communication system in which individual traffic channel data rates may be adapted to specific channel conditions. In particular, a forward error correction coding rate is adapted for individual channels while at the same time maintaining a fixed block size independent of the FEC coding rate. This allows the system data rate to adapt to the channel conditions experienced by a specific user. Thus, users experiencing good communication conditions with low multipath distortion may be allocated higher capacity, whereas users with significant multipath distortion may make use of lower rate (higher levels of coding) error codes to maintain high quality. Messages are sent from a transmitter to a receiver to inform the receiver of the coding rate implemented at any given point in time. These parameters may be adjusted independent of tranmitted power level through the expedient of ensuring that size of a transmitted frame remains constant, while permitting the ability to change FEC coding rates and FEC block sizes.

VO 01/39423 A